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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/694,199

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Ashutosh Dutta

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06/16/2006

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EXAMINER

EL CHANTI, HUSSEIN A

ART UNIT

PAPER NUMBER

2157

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/694,199	<b>Applicant(s)</b> DUTTA ET AL.	
	<b>Examiner</b> Hussein A. El-chanti	<b>Art Unit</b> 2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This action is responsive to preliminary amendment received on Oct. 17, 2005.

Claim 1 was amended. Claims 2-16 are newly added. Claims 1-16 are pending examination.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Borella et al., U.S. Patent No. 6,816,912 (referred to hereafter as Borella).

As to claim 1, Borella teaches a mobile host that moves both within and between interconnected wireless-access micro-mobility domains, wherein each domain comprises an IP server that provides the mobile host with a temporary care-of-address while the mobile host is present in the domain and which address is used to route packets to and from the domain, and wherein each domain further comprises a plurality of base stations interconnected through a set of nodes that automatically establish up-link and down-link routing paths within the domain to and from the mobile host, said mobile host comprising:

an MMP daemon that monitors the mobile host's movement between base stations and based on broadcast messages from the base stations and the IP server within each domain, determines if the movement is within a domain or to a new domain, wherein if the movement is within the domain said MMP daemon updates a down-link routing path in the domain to the mobile host, and wherein if the movement is to the new domain said MMP daemon establishes a new down-link routing path in the new domain to the mobile host and causes the mobile host to obtain a new care-of-address from the IP server in the new domain (see col. 13 lines 8-col. 14 lines 16, mobile device location is updated as mobile devices roam from one location to another);

a first sub-system for managing non-real-time applications at the mobile host wherein said first sub-system captures packets transmitted by the non-real-time applications and changes an originating IP address of the transmitted packets to a permanent IP address associated with the mobile host and further captures received packets intended for the non-real-time applications and changes a destination address of the received packets to the permanent IP address, and wherein said first sub-system monitors for the MMP daemon to change the mobile host's care-of-address and conveys detected changes to corresponding hosts to which the mobile host is conducting non-real-time communications (see col. 7 lines 54-col. 8 lines 51, packets are transmitted to the home agent of the mobile device which has a permanent IP address) ; and

a second sub-system for managing real-time applications at the mobile host wherein said second sub-system monitors for the MMP daemon to change the mobile

host's care-of-address and conveys detected changes to corresponding hosts to which the mobile host is conducting real-time communications (see col. 8 lines 22-67, the destination address is replaced with the address of the foreign agent).

As to claim 2, Borella teaches an integrated mobility management method for managing infra-domain and inter-domain mobility for both real time and non-real time applications in a wireless communication system comprising a backbone network, a plurality of wireless subnetworks connected to the backbone network, said wireless subnetworks comprising servers, routers, gateways, and base stations which communicate with mobile hosts, said method comprising the steps of detecting movement of a mobile host between base stations, said mobile host having a temporary care of address, detecting a gateway beacon message from the new base station to which the mobile host has moved, analyzing the beacon to determine if the mobile host has changed domains, if the mobile host has changed domains, the mobile host detecting an advertisement: message from a server within the subnetwork, analysing the advertisement message to determine if the mobile host has moved to a new sub-network, if the mobile host has moved to a new sub-network, causing the mobile host to communicate to a server in the new sub-network to obtain a new care of address, and updating a default router at the mobile host and sending a registration message using the new care of address to the new sub-network (see col. 13 lines 8-col. 14 lines 16).

As to claim 3, Borella teaches the method in accordance with claim 2 further comprising, if the mobile host did not change domains, updating the default muter at the

mobile host and sending a cache hand-off message to the new base station (see col. 13 lines 8-col. 14 lines 16).

As to claim 4, Borella teaches the method in accordance with claim 3 further comprising, if the mobile host did not change sub-networks, updating a default router at the mobile host and sending a registration message to the new base station (see col. 13 lines 8-col. 14 lines 16).

As to claim 5, Borella teaches the method in accordance with claim 2 further comprising, after sending the registration message to the new base station, the mobile host sending an update message with the new care of address to a home location server connected to the back bone network and sending update messages with the new care of address to other hosts that are corresponding with the mobile host that has moved between base stations (see col. 13 lines 8-col. 14 lines 16).

As to claim 6, Borella teaches the method in accordance with claim 5 wherein said home location register maintains a cache mapping the mobile host's permanent IP address and its current care of address (see col. 13 lines 8-col. 14 lines 9).

As to claim 7, Borella teaches the method in accordance with claim 2, further comprising, after sending the registration message to the new base station, the mobile host sending a message containing the new care of address to session initiating protocol servers of other hosts that are corresponding with the mobile host that has changed base stations (see col. 14 lines 40-65).

As to claim 8, Borella teaches the method in accordance with claim 2 wherein said mobile host has a permanent IP address used to reference the mobile host for

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non-real time applications and a session initiation protocol uniform resource locator address used to reference the mobile host for real time applications, in addition to its current care of address (see col. 14 lines 40-65).

As to claim 9, Borella teaches the method in accordance with claim 8 further comprising at the mobile host changing; addresses of packets for real time applications and for non-real time applications (see col. 7 lines 41-col. 8 lines 67).

As to claim 10, Borella teaches an integrated mobility management method for managing intra-domain and inter-domain mobility for both real time and non-real time applications in a wireless communication system comprising a backbone network, a plurality of wireless subnetworks connected to the backbone network, said wireless sub-networks comprising base stations which communicate with mobile hosts and said mobile hosts each having in a micro-mobility management system (MMP), an SIP macro-mobility management system, and an MIP-LR macro-mobility management system, said method comprising detecting if a mobile host has moved from one domain to an adjacent domain or has moved within a single domain, if the mobile host has moved within a single domain, activating the MMP mobility management system, and if the mobile host has moved to an adjacent domain, determining if the mobile host is engaged in a real time or a non-real time communication, activating the SIP mobility management system if the mobile host is engaged in a real-time communication and activating the MIP-LR mobility management system, if the mobile host is engaged in a non-real time communication (see col. 7 lines 41-col. 8 lines 67 and col. 13 lines 8-col. 14 lines 16).

As to claim 11, Borella teaches the method in accordance with claim 10 wherein said mobile host has a permanent IP address which non-real time applications use to reference the mobile host and a SIP URI which real time applications use to reference the mobile host (see col. 7 lines 41-col. 8 lines 67).

As to claim 12, Borella teaches the method in accordance with claim 11 wherein the mobile host also is configured with a care-of-address, said method further comprising updating the care-of-address as the mobile moves between sub-networks. Claim 13, Borella teaches the method in accordance with claim 12 wherein said updating the care-of-address comprises the mobile host running a MMP daemon that forces the mobile host to obtain the new care-of-address So that packets for the mobile host are properly routed through the backbone network to the new sub-network (see col. 7 lines 41-col. 8 lines 67).

As claim 14, Borella teaches the method in accordance with claim 10 wherein said step of detecting whether a mobile host has moved within a single domain or moved from one domain to an adjacent domain comprises the mobile host running a MMP daemon that monitors the mobile host's movement (see col. 13 lines 25-col. 14 lines 55).

As to claim 15, Borella teaches the method in accordance with claim 14 wherein said MMP daemon registers with a new domain to establish routing within that domain upon detecting movement from one domain to an adjacent domain (see col. 7 lines 41-col. 8 lines 67).



As to claim 16, Borella teaches the method in accordance with claim 10 wherein, when a mobile host that is communicating with a correspondent host moves to an adjacent domain, a MMP daemon in the mobile host forces the mobile host to obtain a new care-of-address of the mobile host and the SIP system in the mobile host detects this change and conveys this new care-of-address to the SIP system of the correspondent host (see col. 7 lines 41-col. 8 lines 67).

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hussein A. El-chanti whose telephone number is (571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hussein El-chanti

May 31, 2006

  
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